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10/575,039	04/05/2006	Osmo Schroderus	879A.0108.U1(US)	5956
29683 7590 03/24/2009 HARRINGTON & SMITH, PC 4 RESEARCH DRIVE, Suite 202 SHELTON, CT 06484-6212				
EXAMINER PARKER, AUTUMN H				
ART UNIT		PAPER NUMBER		
2862				
MAIL DATE		DELIVERY MODE		
03/24/2009		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/575,039

**Applicant(s)**

SCHRODERUS, OSMO

**Examiner**

AUTUMN PARKER

**Art Unit**

2862

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 February 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SG/US)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 09 February 2009 has been entered.

### ***Response to Amendment***

2. Claims 1, 3 and 7-11 are currently amended. No claims are cancelled. Claims 1-13 are currently pending.

### ***Response to Arguments***

3. Applicant's arguments filed 09 February 2009 have been fully considered but they are not persuasive. Regarding independent Claims 1, 7, 10 and 11, Applicant argues that the combination of references used to reject the claims in the previous Office Action neither teach nor suggest that the image sensor is rotatable between aperture sets. However, as discussed previously, Vance teaches that an optic path is rotatable between two apertures, while Arai teaches that imaging sensors may be rotatable in general. It would have been obvious to a person having ordinary skill in the

art at the time the invention was made to have included a rotating image sensor, rather than a fixedly held sensor, for the purpose of insuring proper optical alignment regardless of which aperture was used for imaging.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

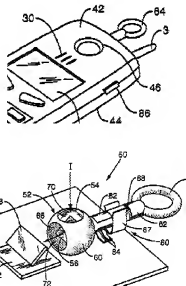
(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 4-8 and 10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vance et al., U.S. Patent No. 6,992,699 (Vance) in view of Arai et al., Pub. No. 2002/0160724 (Arai), in further view of Lee, U.S. Patent No. 7,418,280 (Lee).

6. Regarding Claim 1, Vance teaches an apparatus (Fig.

2) comprising:

- a case structure (Fig. 2, [40]);
- a display component fitted with the case structure (Fig. 2, [26]);
- a camera device (Fig. 4) including an image sensor (Fig. 4, [32]) fitted entirely inside the case structure and optics (Fig. 4, [52]);
- an aperture arrangement including at least two



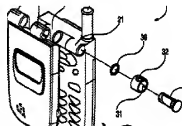
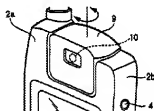
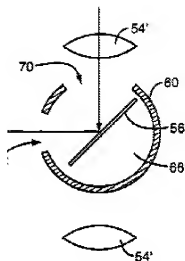
apertures (Fig. 2, [46]; Fig. 3, [48]) fitted in the case structure, for exposing the image sensor directly from the outside.

Vance further teaches that the optics are arranged in fixed connection with the respective aperture (Figs. 8 and 9).

Vance does not teach that the image sensor is rotatable between sets of apertures to at least two exposure directions, at least to the display-component side and to an opposite side relative to the display component, according to which exposure directions the aperture arrangement is arranged in the case structure and at least part of the optics is arranged to be rotatable along with the image sensor and at least part of the optics is arranged in connection with the aperture arrangement.

Arai teaches that the entire camera unit, including the image sensor (Fig. 3, [33]), is rotatable in at least two directions (Fig. 1), to the display side and the opposite side relative to the display and the optics and image sensor are linearly arranged therein to permit the rotation (Fig. 3). Arai, for example, shows that it is known in the art to permit rotation of the imaging sensor in order to facilitate imaging on opposing

sides of the camera. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have included the rotation of the image sensor as taught by Arai in the invention taught by Vance in order to insure proper alignment of



the optical path with the imaging sensor surface. Neither Vance nor Arai teach a mechanism configured to move at least the image sensor linearly in the case structure to a position clear of the first and second apertures, in order to permit rotation of the image sensor. Lee teaches a camera module (Fig. 7, [31, 32, 40]), which moves linearly into and out of a hinge part (col. 5, lines 13-16). It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have included the linear motion of retracting the camera into the case body or protruding it out of the case body in order to protect the lens from constant exposure to contamination and damage (col. 1, lines 32-35).

7. Regarding Claim 4, Vance in view of Arai, in further view of Lee teaches the salient features of the invention as claimed supra. Vance additionally teaches there are shutter devices (Fig. 7, [90]) for closing the aperture that is not in use at the time (col. 5, lines 25-27).

8. Regarding Claim 5, Vance in view of Arai, in further view of Lee teaches the salient features of the invention as claimed supra. Vance additionally teaches that the shutter devices operate in conjunction with the camera devices (Fig. 7, [90]; col. 5, lines 25-27).

9. Regarding Claim 6, Vance in view of Arai, in further view of Lee teaches the salient features of the invention as claimed supra. Vance additionally teaches at least one detection device (Fig. 4, [80]) for determining the exposure direction in use at a given time.

10. Regarding Claim 7, Vance discloses a method for controlling the orienting of a camera device in an electronic device (Figs. 1 and 4, [64]), in which there are directional camera devices inside the case structure of the device (Fig. 4), including at least an image sensor (Fig. 4, [32]) and optics (Fig. 4, [52]) and in which the case structure includes an aperture arrangement including at least two apertures (Fig. 2, [46]; Fig. 3, [48]) in connection with at least part of the optics is arranged for exposing the image sensor directly from the outside, which aperture arrangement is arranged in at least two exposure directions at least to the display-component side and to an opposite side relative to the display component (Fig. 2; Fig. 3), and in which:

- imaging is performed (col. 2, lines 63-64),

Vance further teaches that the optics are arranged in fixed connection with the respective aperture (Figs. 8 and 9). Vance does not teach the image sensor is rotatable between sets of apertures nor that the sensor and at least part of the said optics is oriented by rotating them to the selected exposure direction without directing the orienting operations to the actual case structure of the device and that the image sensor and the said part of the optics are linearly moved in the case structure, in order to permit their rotation. Arai teaches that the entire camera unit, including the image sensor (Fig. 3, [33]), is rotatable in at least two directions (Fig. 1), to the display side and the opposite side relative to the display and the optics (Fig. 3). Arai, for example, shows that it is known in the art to permit rotation of the imaging sensor in order to facilitate imaging on opposing sides of the camera. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have included the rotation

of the image sensor as taught by Arai in the invention taught by Vance in order to insure proper alignment of the optical path with the imaging sensor surface. Neither Vance nor Arai specifically the image sensor and optics are linearly moved in the case structure to a position clear of the first and second apertures, in order to permit rotation of the image sensor. Lee teaches a camera module (Fig. 7, [31, 32, 40]), which moves linearly into and out of a hinge part (col. 5, lines 13-16). It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have included the linear motion of retracting the camera into the case body or protruding it out of the case body in order to protect the lens from constant exposure to contamination and damage (col. 1, lines 32-35).

11. Regarding Claim 8, Vance in view of Arai, in further view of Lee teaches the salient features of the invention as claimed supra. Vance additionally teaches that the part of the aperture arrangement not in use at the time is shut off (Fig. 7, [90]) from the aperture arrangement (col. 5, lines 25-27).

12. Regarding Claim 10, Vance discloses an image sensor (Fig. 4, [32]), which can be fitted to an electronic device (Fig. 2), which electronic device includes:

- a case structure (Fig. 2, [40]);
- a display component (Fig. 2, [26]) arranged in connection with the case structure;
- camera devices (Fig. 4) that can be oriented, fitted inside the case structure;
- including the said entirely internally fitted image sensor (Fig. 4, [32]) and optics (Fig. 4, [52]);



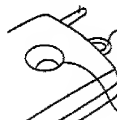
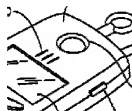
- an aperture arrangement including at least two apertures fitted in the case structure in connection with which aperture arrangement at least part of the optics is arranged, for exposing the image sensor directly from the outside (Fig. 2, [46]; Fig. 3, [48]);

Vance further teaches that the optics are arranged in fixed connection with the respective aperture (Figs. 8 and 9). Vance does not teach that the image sensor is rotatable between sets of apertures and arranged to be rotatable to at least two exposure directions, at least to the display component side and to an opposite side relative to the display component, according to which exposure directions the aperture arrangement is arranged in the case structure and at least part of the optics is arranged to be rotatable along with the image sensor characterized in that the image sensor and the optics arranged in connection with it can be linearly moved in the case structure, in order to permit their rotation. Arai teaches that the entire camera unit, including the image sensor (Fig. 3, [33]), is rotatable in at least two directions (Fig. 1), to the display side and the opposite side relative to the display and the optics and image sensor are linearly arranged therein to permit the rotation (Fig. 3). Arai, for example, shows that it is known in the art to permit rotation of the imaging sensor in order to facilitate imaging on opposing sides of the camera. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have included the rotation of the image sensor as taught by Arai in the invention taught by Vance in order to insure proper alignment of the optical path with the imaging sensor surface. Neither Vance nor Arai specifically the image sensor and optics are linearly moved in the case structure to

a position clear of the first and second apertures, in order to permit rotation of the image sensor. Lee teaches a camera module (Fig. 7, [31, 32, 40]), which moves linearly into and out of a hinge part (col. 5, lines 13-16). It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have included the linear motion of retracting the camera into the case body or protruding it out of the case body in order to protect the lens from constant exposure to contamination and damage (col. 1, lines 32-35).

13. Regarding Claim 11, Vance teaches an electronic device comprising

- a case having a front side (Fig. 2) and a back side (Fig. 3) with at least two apertures (Fig. 2, [46]; Fig. 3, [48]), with two apertures arranged so that one aperture is on the front side and another aperture is on the back side, the two apertures aligned with each other,



Vance further teaches that the optics are arranged in fixed connection with the respective aperture (Figs. 8 and 9). Vance does not specifically teach an image sensor is rotatable between sets of apertures and disposed between the front side and the back side rotatable to selectively point through either aperture. Arai teaches that the entire camera unit, including the image sensor (Fig. 3, [33]), is rotatable to selectively point through either aperture (Fig. 1). Arai, for example, shows that it is known in the art to permit rotation of the imaging sensor in order to facilitate imaging on opposing sides of the camera. It would have been obvious to a person

having ordinary skill in the art at the time the invention was made to have included the rotation of the image sensor as taught by Arai in the invention taught by Vance in order to insure proper alignment of the optical path with the imaging sensor surface. Neither Vance nor Arai teach a mechanism configured to slide the image sensor inside the case to a position away from the aligned apertures at which position the image sensor is rotatable. Lee teaches a camera module (Fig. 7, [31, 32, 40]), which moves linearly into and out of a hinge part (col. 5, lines 13-16). It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have included the linear motion of retracting the camera into the case body or protruding it out of the case body in order to protect the lens from constant exposure to contamination and damage (col. 1, lines 32-35).

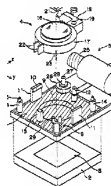
14. Regarding Claims 12 and 13, Vance in view of Arai, in further view of Lee teaches the salient features of the invention as claimed supra. Vance further teaches the electronic device comprises a mobile telephone (Fig. 2; col. 2, lines 32-35).

15. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vance in view of Arai, in further view of Lee, as applied to claim 1 above, and further in view of Kuchimaru, Pub. No. US 2005/0047770 (hereafter referred to as 'Kuchimaru').

16. Regarding Claim 2, Vance in view of Arai, in further view of Lee teaches the salient features of the invention as claimed supra. Neither Vance, Arai, nor Lee teaches that at least part of the optics is equipped with actuator devices in order to permit alteration of the focal length. Kuchimaru teaches an optical structure of a camera device (Fig. 1, [1A]), installed in a mobile phone or similar, which permits adjustment of focal

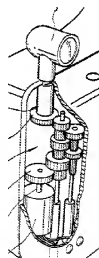
length (p. 3, ¶ [0051]). It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have included the adjustable focal length mechanism taught by Kuchimaru in the invention taught by Vance in view of Arai for the purpose of focusing the image sharply to avoid blurring.

17. Regarding Claim 3, Vance in view of Arai, in further view of Lee teaches the salient features of the invention as claimed supra. Neither Vance, Arai, nor Lee teaches that at least part of the optics is arranged for close-up imaging. Kuchimaru teaches an optical structure of a camera device (Fig. 1, [1A]), installed in a mobile phone or similar, which includes a zooming capability (p. 3, ¶ [0053]). It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have included the zooming function taught by Kuchimaru in the invention taught by Vance in view of Arai in order to achieve close-up or more detailed images.



18. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vance in view of Arai, in further view of Lee, as applied to claim 7 above, and further in view of Tseng et al., U.S. Patent No. 6,266,090 (hereafter referred to as 'Tseng').

19. Regarding Claim 9, Vance in view of Arai, in further view of Lee teaches the salient features of the invention as claimed supra. Neither Vance, Arai, nor Lee teaches that the rotation of the image sensor and the optics is motorized. Tseng teaches a motor and gears used to rotate a lens in a camera (Fig. 1, [1, 2]). It would have been obvious to



a person having ordinary skill in the art at the time the invention was made to have included the motor mechanism taught by Tseng in the invention taught by Vance in view of Arai for the purpose of automating the rotation of the camera unit. Further, it has been held that providing an automatic or mechanical means to replace a manual activity which accomplished the same result is not sufficient to distinguish over the prior art. (See MPEP 2144.04 III.)

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to AUTUMN PARKER whose telephone number is (571)270-3916. The examiner can normally be reached on Mon-Thurs, 8:00 am - 5:00 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Assouad can be reached on (571) 272-2210. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AP  
20 Mar 2009

/Patrick J Assouad/  
Supervisory Patent Examiner, Art Unit 2862